Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

FINAL

AIR QUALITY PERMIT

Issued under 401 KAR 52:020

Permittee Name:	**Air Products and Chemicals, Inc.**
Mailing Address:	**7201 Hamilton Blvd, Allentown, PA 18195-1501**
Source Name:	**Air Products and Chemicals, Inc.**
Mailing Address:	**US 23, P.O. Box 1492** **Catlettsburg, KY 41129**
Source Location:	**Same as Above**
Permit ID:	**V-07-008**
Agency Interest:	**83915**
Activity ID:	**APE20070001**
Review Type:	**Title V, Operating**
Source ID:	**21-019-00117**
Regional Office:	**Ashland Regional Office** **1550 Wolohan Drive, Suite 1** **Ashland, KY 41102** **(606) 929-5285**
County:	**Boyd**
Application Complete Date:	**February 21, 2007**
Issuance Date:	**October 15, 2007**
Revision Date:	
Expiration Date:	**October 15, 2012**

John S. Lyons, Director
Division for Air Quality

Revised 09/29/06

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	Permit type	Log or Activity#	Complete Date	Issuance Date	Summary of Action
V-07-008	**Initial Issuance**	**APE20070001**	**2/21/07**	**10/15/07**	**Initial operating Permit**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SINGLE SOURCE DETERMINATION:

The hydrogen plant, operated by Air Products, produces hydrogen using steam methane reforming technology to supply hydrogen and steam only to the Marathon Petroleum Company's Catlettsburg petroleum refinery. Marathon Petroleum Company's Catlettsburg refinery is a PSD major source for regulated pollutants. Air Products' hydrogen plant is within the property limit of Marathon's refinery. Together, they are considered by the Kentucky Division for Air Quality to be a single "major source" as defined in 401 KAR 52:001, Section (1)(45)(b), definition of Major source for regulated air pollutants other than HAPS. Each owner/operator is responsible and liable for their own violations unless there is a joint cause for the violations.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emission Unit: 01, Hydrogen Reformer:

Description:

The steam methane reforming (SMR) process includes a reformer, which contains catalyst filled tubes. Natural gas is the process feed. The reforming reactions that produce hydrogen occur in the catalyst-filled tubes. The reformer combusts fuels to generate the necessary heat of reaction. Pressure swing adsorption (PSA) purge gas, natural gas, and reformer synthesis gas (syngas) are possible fuels. Emissions go out through the hydrogen reformer flue gas stack.

Construction Date: 2002
Fuel: Pipeline quality natural gas, PSA purge gas, and reformer syngas.
Production Capacity: 34 million standard cubic feet (scf) of hydrogen per day (nominal)
Heat input Capacity: 455 million British thermal units per hour (mmBtu/hr) at high heating value (HHV)
Control Device: Internal flue gas recirculation to reduce NOx.

APPLICABLE REGULATIONS:

401 KAR 60:005, 40 CFR Part 60 Standards of Performance for New Stationary Source- incorporates by reference 40 CFR 60.104(a)(1). Fuels burned in the hydrogen reformer include process gas streams from the Hydrogen Plant. These gases are not refinery fuel gas, but are regulated as fuel gas as per 40 CFR 60.104 (a)(1).

40 CFR 63 Subpart DDDDD- National Emission Standards for Hazardous Air Pollutants for the Industrial, Commercial, and Institutional Boilers and Process Heaters. The reformer construction was commenced prior to January 13, 2003 and burns only gaseous fuels. The reformer is classified as an existing large gaseous fuel unit. Per 40 CFR 63.7506(b)(1), existing large gaseous fuel units are subject to only to the initial notification requirements in 40 CFR 63.9(b). They are not subject to any other requirements of 40 CFR 63 Subpart DDDDD or 40 CFR 63 Subpart A.

NON-APPLICABLE REGULATIONS:

The source has elected to accept permit conditions to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality, and 401 KAR 51:052, Review of New Sources In or Impacting Upon Non-attainment Areas.

401 KAR 59:015- New Indirect Heat Exchangers does not apply. The reformer is not an indirect heat exchanger because a heat transfer medium is not used.

401 KAR 63:002, incorporating by reference 40 CFR 63 Subpart CC- National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, does not apply. The hydrogen plant is primarily engaged in the manufacture of industrial gas for sale, and is therefore not a petroleum refining process unit as defined by the regulation.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 01, Hydrogen Reformer

401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart Db- Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, does not apply. The reformer is a process heater as defined in 40 CFR 60 Subpart Db, and is not considered a steam-generating unit.

1. Specific Operating Limitations:

Pursuant to 40 CFR 60.104(a)(1), *"No owner or operator subject to the provisions of this subpart shall: Burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide(H2S) in excess of 230 mg/dscm (0.10 gr/dscf). The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this paragraph."*

Compliance Demonstration Method:

Compliance is demonstrated by detector tube monitoring as described in alternative monitoring plan approved by December 30, 2003 letter from U.S. EPA Region IV. The approval letter was addressed to John Lyons, Director KY Division for Air Quality dated December 30, 2003 by Beverly H. Banister, Director Air, Pesticides and Toxics Management Division US EPA Region IV.

2. Specific Emission Limitations:

a. The source has elected to accept permit conditions to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality, and 401 KAR 51:052, Review of New Sources In or Impacting Upon Non-attainment Areas, to the proposed modification. Relaxation of limitations on the capacity to emit of the equipment which were established to preclude the applicability of 401 KAR 51:017, Prevention of significant deterioration of air quality, or 401 KAR 51:052, Review of new sources in or impacting upon non-attainment areas, is prohibited unless the applicable provisions of these regulations have been satisfied. Alternatively, the Permittee may submit documentation that a proposed activity would not cause the change authorized to become classified as a major modification pursuant to 401 KAR 51:017 or 51:052. The "synthetic minor" emission limitations for the Hydrogen Reformer Furnace are as follows:

Affected Units	Maximum emissions (tons/yr)				
	SO_2	NO_X	VOC	CO	PM_{10}
Hydrogen Reformer Furnace	1.1	104.6	9.7	70.3	13.3

In addition, heat input to the reformer furnace shall not exceed 455 mmBtu/hr, based on a 365-day rolling average.

b. Refer to Section D for the source-wide emission limits and compliance.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 01, Hydrogen Reformer

Compliance Demonstration Method:
The permittee shall calculate for each day, in tons per year, the 365-day rolling sum emissions of SO2 and PM10. Refer to Section D for compliance with NOx, CO, and VOC limits. Emission of NOx shall be based upon data obtained from NOx CEMS. Emissions of CO shall be based upon an emission factor expressed in terms of pounds per million Btu heat input. The emission factor shall be calculated using the heat input rate and CO emission rate measured during the most recent performance test. Emissions of SO2, VOC and PM10 shall be based upon emission factors of 0.0006 lb/mmBtu heat input (HHV), 0.0055 lb/mmBtu heat input (HHV), and 0.0076 lb/mmBtu heat input (HHV), respectively.

3. Specific Testing Requirements:

The fuel gas streams complying with the H2S alternative monitoring plan approved by the U.S. EPA Region IV pursuant to 40 CFR 60.13 (i) are exempt from the initial H2S performance testing requirements specified at 40 CFR 60.106(e) and 40 CFR 60.8.

4. Specific Monitoring Requirements:

a. NOx emissions shall be monitored by a NOx continuous emission monitoring system (CEM) that complies with all provisions of 40 CFR 60 Appendix B, Performance Specification 2.

b. The NOx CEMS shall comply with all the provisions of 40 CFR 60 Appendix F, Procedure 1, Quality Assurance Requirements for Gas Continuous Emission Monitoring Systems used in Compliance Determination.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 01, Hydrogen Reformer

c. As specified in the H2S alternative monitoring plan approved by U.S. EPA Region IV in a letter dated December 30, 2003, detector tubes shall be used to measure the H2S concentration of the feed stream (natural gas and recycle hydrogen) exiting the first of two hydrogenator/ desulfurizer beds located upstream of the hydrogen reformer furnace. The alternative monitoring plan consists of the following steps.

i. Random H2S detector tube samples shall be collected on a semi-annual basis with a minimum of three months between samples.
ii. If any detector tube checks indicate that the H2S concentration at the outlet of the first hydrogenator/desulfurizer module exceeds 81 ppm, additional detector tube samples shall be collected on a daily basis for seven days. If the average plus three standard deviations for this data set is less than 81 ppm, monitoring shall resume in accordance with the alternative schedule at the current step. If the average plus three standard deviations for this data is 81 ppm or higher, proceed to step iii.
iii. By the end of the next business day following the last sample for a data set indicating that the average plus three standard deviations equals or exceeds 81 ppm, the Division's Regional Office listed in the front of this permit shall be notified by phone, fax, or e-mail. Additional detector tube samples shall be collected on a daily basis for a two-week period for a total of 14 samples. Following completion of the two-week period, detector tube sampling shall be conducted once per week until the Division either approves a revised sampling schedule or the U.S. EPA withdraws approval for use of an alternative monitoring plan.

d. The fuel gas streams complying with the H2S alternative monitoring plan approved by U.S. EPA Region IV pursuant to 40 CFR 60.13(i) are exempt from the monitoring requirements specified at 40 CFR 60.105 (a)(3) and (4).

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain records of the daily heat input rate and daily-calculated 365-day rolling average heat input rate to the Hydrogen Reformer.

b. The permittee shall maintain records of the daily-calculated 365-day rolling sum emissions of NOx, VOC, and CO from the Hydrogen Reformer Flue Gas Stack. Emissions of NOx shall be based upon data obtained from NOx CEMS. Emissions of CO shall be based upon an emission factor, expressed in terms of pounds per million Btu heat input (HHV), developed from the most recent performance test. Emissions of VOC shall be based upon an emission factor of 0.0055 lb/mmBtu heat input (HHV).

c. The permittee shall retain records of the H2S alternative monitoring plan sampling results.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 01, Hydrogen Reformer

6. Specific Reporting Requirements:

a. A summary of the H2S alternative monitoring plan sampling results shall be included in the semi-annual monitoring reports required in the Section F of this permit.

b. The fuel streams complying with the H2S alternative monitoring plan approved by U.S. EPA pursuant to 40 CFR 60.13 (i) are exempt from the semi-annual excess emission and monitoring system performance reporting requirements specified at 40 CFR 60.105 (e)(3) and 40 CFR 60.8.

c. Refer to Section D, Source Emission Limitations and Testing Requirements.

7. Specific Control Equipment Operating Conditions:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 02, Condensate Stripper

Description:

Condensate stripper strips off any dissolved CO2 and potential steam impurities by using stripping steam and the gases are vented to the atmosphere through the vent system.

Date of Construction: 2002
Control Device: None
Capacity: Vent Gas Flow based on 34 million scf hydrogen production per day (nominal)

APPLICABLE REGULATIONS:

None

NON-APPLICABLE REGULATIONS:

The source has elected to accept permit conditions to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality, and 401 KAR 51:052, Review of New Sources In or Impacting Upon Non-attainment Areas.

401 KAR 63:002, incorporating by reference 40 CFR 63 Subpart CC- National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, does not apply. The hydrogen plant is primarily engaged in the manufacture of industrial gas for sale, and is therefore not a petroleum refining process unit as defined at 40 CFR 63 Subpart CC.

1. **Specific Operating Limitations :**

None

2. **Specific Emission Limitations:**

Refer to Section D for the source-wide emission limits and compliance.

3. **Specific Testing Requirements:**

None

4. **Specific Monitoring Requirements:**

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 02, Condensate Stripper

5. Specific Recordkeeping Requirements

a. The permittee shall maintain records of daily hydrogen production rate and daily-calculated 365-day rolling sum hydrogen production rate.
b. The permittee shall maintain daily records of daily calculated, 365-day rolling sum VOC and CO emissions (ton/year) from the Condensate Stripper Vent, calculated using the daily-calculated, 365-day rolling sum hydrogen production rate and the VOC and CO emission factors (lb/mmscf of hydrogen production) developed from the most recent performance test.

6. Specific Reporting Requirements:

See Section D, Source Emission Limitations and Testing Requirements.

7. Specific Control Equipment Operating Conditions:

None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 03, Flare

Description:

Flare and Flare Gas:

The hydrogen plant uses a flare equipped with natural gas-fired pilot burners to burn excess hydrogen product during refinery hydrogen demand curtailment and also to burn PSA feed gas (syngas), PSA purge gas, hydrogen product, natural gas, and relief valve vents from the hydrogen plant during startup, shutdown and malfunction, process upsets, maintenance, and emergencies.
Date of Construction: 2003
Capacity- Natural Gas-fired Pilots: Total 200 standard cubic feet per hour (nominal)
Control Device: None.

APPLICABLE REGULATIONS:

401 KAR 63:015- Flare.

NON-APPLICABLE REGULATIONS:

The source has elected to accept permit conditions to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality, and 401 KAR 51:052, Review of New Sources In or Impacting Upon Non-attainment Areas.

401 KAR 63:002, incorporating by reference 40 CFR 63 Subpart CC- National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, does not apply. The hydrogen plant is primarily engaged in the manufacture of industrial gas for sale, and is therefore not a petroleum refining process unit as defined at 40 CFR 63 Subpart CC.

40 CFR Part 64, Compliance Assurance Monitoring for Major Stationary Sources, does not apply. The flare is subject to a source-wide emissions cap, which is exempted from consideration as an emission limitation at 40 CFR 64 Section 64.2(b)(1)(v).

1. **Specific Operating Limitations :**
None

2. **Specific Emission Limitations:**

a. The permittee shall not allow the emission into the open air of particular matter from the flare that is greater than twenty (20) percent opacity for more than three (3) minutes in one (1) day. [401 KAR 63:015 (3)].

Compliance Demonstration Method:
Compliance is demonstrated by the combustion of natural gas, hydrogen product, and hydrogen plant process gas only.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 03 Flare:

b. Refer to Section D for the source-wide emission limits and compliance.

3 Specific Testing Requirements:
None

4. Specific Monitoring Requirements:
None

5. Specific Recordkeeping Requirements:
The permittee shall maintain daily records of daily-calculated 365-day rolling sum NOx, VOC and CO emissions from the flare. The facility may calculate and record actual emissions on a monthly basis for the first three months after the final permit V-07-008 is issued.

6. Specific Reporting Requirements:
See Section D, Source Emission Limitations and Testing Requirements.

7. Specific Control Equipment Operating Conditions:
None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 04, Fugitive Emissions

Description:
Plant-wide Fugitive Emission from valves, flanges and fittings

APPLICABLE REGULATIONS:
None

NON-APPLICABLE REGULATIONS:
The source has elected to accept permit conditions to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality, and 401 KAR 51:052, Review of New Sources In or Impacting Upon Non-attainment Areas.

401 KAR 63:002, incorporating by reference 40 CFR 63 Subpart CC - National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, does not apply. The hydrogen plant is primarily engaged in the manufacture of industrial gas for sale, and is therefore not a petroleum refining process unit as defined at 40 CFR 63 Subpart CC.

401 KAR 63:002, incorporating by reference 40 CFR 63 Subpart H - National Emission Standards for Organic HAPs for Equipment Leaks, does not apply. The hydrogen plant is not a hazardous organic chemical manufacturing process unit as that term is defined at 40 CFR 63 Subpart F.

401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries, does not apply. The hydrogen plant is primarily engaged in manufacturing of industrial gas for sale and not a petroleum refining process.

401 KAR 60:005, incorporating by reference 40 CFR 60 Subpart VV - Standards of Performance for Equipment Leaks of VOC in the SOCMI, does not apply. The hydrogen plant is not a synthetic organic chemical manufacturing process.

1. **Specific Operating Limitations:**
   None

2. **Specific Emission Limitations:**
   Refer to Section D for the source-wide emission limits and compliance.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 04, Fugitive Emissions

3. **Specific Testing Requirements:**
   None

4. **Specific Monitoring Requirements:**
   None

5. **Specific Recordkeeping Requirements:**
   The permittee shall maintain annual records of the annual-calculated VOC and CO emissions (ton/yr) from fugitive equipment leaks. Emissions shall be based upon emission factors and estimated component counts. In place of actual emission rates, the permittee may use worst-case emission estimates.

6. **Specific Reporting Requirements:**
   See Section D, Source Emission Limitations and Testing Requirements.

7. **Specific Control Equipment Operating Conditions:**
   None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit: 05, Steam Vents

Description:

Steam Vents: Multiple steam vents of differing VOC composition
Date of Construction: 2002.
Capacity: N/A
Control Device: None.

Applicable Regulations:

None

NON-APPLICABLE REGULATIONS:

The source has elected to accept permit conditions to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality, and 401 KAR 51:052, Review of New Sources In or Impacting Upon Non-attainment Areas.

401 KAR 63:002, incorporating by reference 40 CFR 63 Subpart CC- National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, does not apply. The hydrogen plant is primarily engaged in the manufacture of industrial gas for sale, and is therefore not a petroleum refining process unit as defined at 40 CFR 63 Subpart CC.

1. **Specific Operating Limitations:**
   None

2. **Specific Emission Limitations:**
   Refer to Section D for the source-wide emission limits and compliance.

3. **Specific Testing Requirements:**
   None

4. **Specific Monitoring Requirements:**
   None

5. **Specific Recordkeeping Requirements:**
   The permittee shall maintain annual records of annual-calculated VOC (ton/yr) emissions from steam vents. In place of actual emission rates, the permittee may use worst-case emission estimates.

6. **Specific Reporting Requirements:**
   See Section D, Source Emission Limitations and Testing Requirements.

7. **Specific Control Equipment Operating Conditions:**
   None

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

Description	Generally Applicable Regulation
1. Cooling tower (1000 gpm nominal)	401 KAR 63:010
2. Analyzer Vents	None
3. Cold Solvent degreaser(s) (parts washers)	None
4. Lube oil storage	None
5. Water treatment chemical storage and handling	None
6. Portable Fuel-Fired Rental Equipment	None
7. Safety Relief Valves	None
8. Wastewater Sump	None
9. Catalyst Loading	401 KAR 63:010

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. SO_2, NO_x, VOC, CO and PM_{10} emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.

3. The source has elected to accept permit conditions to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality, and 401 KAR 51:052, Review of New Sources In or Impacting Upon Non-attainment Areas, to the proposed modification. Relaxation of limitations on the capacity to emit of the equipment which were established to preclude the applicability of 401 KAR 51:017, Prevention of significant deterioration of air quality, or 401 KAR 51:052, Review of new sources in or impacting upon non-attainment areas, is prohibited unless the applicable provisions of these regulations have been satisfied. Alternatively, the Permittee may submit documentation that a proposed activity would not cause the change authorized to become classified as a major modification pursuant to 401 KAR 51:017 or 51:052.

   a. The "synthetic minor" emission limitations for the Hydrogen Generation Unit are as follows:

Affected Units	maximum emissions (tons/yr)				
	SO_2	**NOx**	**VOC**	**CO**	**PM_{10}**
Hydrogen Generation Unit	NA	NA	14.5	4.6	NA

   b. The "synthetic minor" emission limitations for the Hydrogen Reformer Furnace are as follows:

Affected Units	Maximum emissions (tons/yr)				
	SO_2	**NO_X**	**VOC**	**CO**	**PM_{10}**
Hydrogen Reformer Furnace	1.1	104.6	9.7	70.3	13.3

   In addition, heat input to the reformer furnace shall not exceed 455 mmBtu/hr, based on a 365-day rolling average.

Compliance Demonstration Method:

a. Compliance shall be determined by performing daily calculations of daily emission rates and rolling 365-day total emissions. Total annual emissions from the source shall not exceed the emission rates listed in the following table, based on a daily-calculated rolling 365-day total.

Source-wide Synthetic Minor Emission Limits (ton/yr)

Pollutant	Emissions Limits (daily-calculated rolling 365-day total)
NOx	112.7
CO	99.5
VOC	31.1

b. The permittee shall calculate and record daily actual emissions and total emissions for the previous 365-day period for the emission units listed in Section B of this permit. In place of the actual emission rates, the permittee may use worst -case emission estimates. The facility may calculate and record actual emissions on a monthly basis for the first three-months after the final permit V-07-008 is issued.

c. The permittee shall retain documentation of emission calculations on site for a minimum of five years. The documentation shall be made available for inspection by the Division or U.S. EPA upon request.

d. A summary of the first three-month monthly emissions and the consecutive daily-calculated rolling 365-day total emissions shall be included in the Semi-Annual Monitoring Report required by Section F of this permit.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

   Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.

8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7 above) to the Regional Office listed on the front of this permit within 30 days. Deviations from permit requirements, including those previously reported under F.7 above, shall be included in the semiannual report required by F.6 [Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
   a. Identification of the term or condition;
   b. Compliance status of each term or condition of the permit;
   c. Whether compliance was continuous or intermittent;
   d. The method used for determining the compliance status for the source, currently and over the reporting period.
   e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following addresses:

Division for Air Quality
Ashland Regional Office
1550 Wolohan Drive, Suite 1
Ashland, KY 41102.

U.S. EPA Region 4
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.

SECTION G - GENERAL PROVISIONS

1. General Compliance Requirements

   a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 Section 3(1)(b) and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].

   b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
      (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
      (2) The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
      (3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;
      (4) New requirements become applicable to a source subject to the Acid Rain Program.

      Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Re-openings shall be made as expeditiously as practicable. Re-openings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

   d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020 Section 3(1)(c)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

i. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens. [Section 1a-15-b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].

l. This permit does not convey property rights or exclusive privileges [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].

o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

q. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of a permit shall be considered compliance with:
(1) Applicable requirements that are included and specifically identified in the permit and
(2) Non-applicable requirements expressly identified in this permit.

2. Permit Expiration and Reapplication Requirements

a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020 Section 8(2)].

3. Permit Revisions

a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)

4. Testing Requirements

   a. Pursuant to 401 KAR 50:045 Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.

   b. Pursuant to 401 KAR 50:045 Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.

   c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

5. Acid Rain Program Requirements

   a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

   b. The permittee shall comply with all applicable requirements and conditions of the Acid Rain Permit and the Phase II permit application (including the Phase II NOx compliance plan and averaging plan, if applicable) incorporated into the Title V permit issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

6. Emergency Provisions

   a. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
   (1) An emergency occurred and the permittee can identify the cause of the emergency;

SECTION G - GENERAL PROVISIONS (CONTINUED)

(2) The permitted facility was at the time being properly operated;
(3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
(4) Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
(5) This requirement does not relieve the source of other local, state or federal notification requirements.

b. Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

7. Ozone Depleting Substances

a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
(1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
(2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
(3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
(4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
(5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
(6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION G - GENERAL PROVISIONS (CONTINUED)

8. Risk Management Provisions

   a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

      RMP Reporting Center
      P.O. Box 1515
      Lanham-Seabrook, MD 20703-1515.

   b. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION H - ALTERNATE OPERATING SCENARIOS

N/A.